Grade 4 Math	**1.0** (Needs additional support)	**2.0** (has foundational knowledge)	**3.0** (meets learning goal or expectation)	**4.0** (goes above and beyond what was taught)
Operations & Algebraic Thinking *3 Standards*				
1) Adds and subtracts whole numbers with four digits; multiplies whole numbers with three digits; divides whole numbers with one by three digits; provides the correct number sentence as a result of a single and multi-step word problem; knows multiplication and division facts through 12x12	Requires considerable teacher support and guidance to achieve skills	Adds and subtracts whole numbers up to two digits ; knows multiplication and division facts through 10x10; identifies which operation a word problem expects	Adds and subtracts whole numbers with four digits; multiplies whole numbers with three digits; divides whole numbers with one by three digits; provides the correct number sentence as a result of a single and multi-step word problem; knows multiplication and division facts through 12x12	Adds and subtracts whole numbers beyond four digits; multiplies whole numbers more than three digits (in multiple methods) ; divides whole numbers more than one by three digits; solves multi-step word problems involving multiple operations
2) Identifies factors of a given number up to 100; provides numerous examples of multiples of a given number up to 100; identifies whether a given number (up to 100) is prime or composite	Requires considerable teacher support and guidance to achieve skills	Identifies some factors of a given number up to 100; provides some examples of multiples of a given number up to 100; identifies whether some given numbers (up to 100) are prime or composite	Identifies factors of a given number up to 100; provides numerous examples of multiples of a given number up to 100; identifies whether a given number (up to 100) is prime or composite	Uses the knowledge of factors and multiples in a variety of areas of the curriculum (i.e. LCD for fractions, long division, etc.); Identifies whether a given number is divisible by another (rules of divisibility)
3) Identifies the rule and completes the four types of "What's my Rule?" tables; identifies the rule and can complete a pattern of shapes or numbers	Requires considerable teacher support and guidance to achieve skills	Identifies the rule and completes some of the four types of "What's my Rule?" tables, but not all; identifies the rule and completes some patterns of shapes or numbers	Identifies the rule and completes the four types of "What's my Rule?" tables; identifies the rule and can complete a pattern of shapes or numbers	Identifies the rule(s) and completes a pattern involving 2 or more steps

Numbers/Operations in Base 10 *5 Standards*	**1.0** (Needs additional support)	**2.0** (has foundational knowledge)	**3.0** (meets learning goal or expectation)	**4.0** (goes above and beyond what was taught)
1) Identifies the value of a digit up to the millions place	Requires considerable teacher support and guidance to achieve skills	Demonstrates the concept of place value with base 10 blocks	Identifies the value of a digit up to the millions place	Demonstrates knowledge of the concept of the powers of 10
2) Fluently adds and subtracts four-digit whole numbers; multiplies a four-digit whole number by a single digit whole number and multiplies two (2) digit numbers; finds whole number quotients and remainders with up to four-digit dividends and one digit divisors.	Requires considerable teacher support and guidance to achieve skills	Knows multiplication/division facts through 12 x 12; knows the place value of the numbers in a number sentence; divides 2 or 3 digit numbers by a one digit divisor	Fluently adds and subtracts four-digit whole numbers; multiplies a four-digit whole number by a single digit whole number and multiplies two (2) digit numbers; finds whole number quotients and remainders with up to four-digit dividends and one digit divisors.	Adds, subtracts, multiplies and divides numbers greater than 4 digits
3) Explains why (a/b) fraction is equivalent to a fraction (nxa) (nxb) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size; compares two fractions with different denominators; recognizes that comparisons are only valid when 2 fractions refer to the same whole; records the results of comparisons with symbols >, < or = and justifies the conclusion (ex: using a visual fraction model)	Requires considerable teacher support and guidance to achieve skills	Recognizes equivalent fractions; compares fractions with the same denominator; records <, > or = comparisons with fractions	Explains why (a/b) fraction is equivalent to a fraction (nxa) (nxb) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size; compares two fractions with different denominators; recognizes that comparisons are only valid when 2 fractions refer to the same whole; records the results of comparisons with symbols >, < or = and justifies the conclusion (ex: using a visual fraction model)	Uses benchmark fractions and explains a strategy to compare fractions with unlike denominators without a picture or other visual

4) Understands the addition and subtraction of fractions as joining and separating parts referring to the same whole; decomposes a fraction into a sum of fractions with the same denominator in more than one way; adds and subtracts mixed numbers with like denominators; solves word problems involving the addition and subtraction of fractions referring to the same whole and having like denominators	Requires considerable teacher support and guidance to achieve skills	Decomposes a fraction into a sum of fractions with the same denominator in one way; adds and subtracts fractions with the same denominator	Understands the addition and subtraction of fractions as joining and separating parts referring to the same whole; decomposes a fraction into a sum of fractions with the same denominator in more than one way; adds and subtracts mixed numbers with like denominators; solves word problems involving the addition and subtraction of fractions referring to the same whole and having like denominators	Solves word problems involving addition and subtraction of fractions referring to the same whole number and having unlike denominators
5) Expresses a fraction with denominator 10 as an equivalent fraction with denominator 100, and uses this technique to add (2) fractions with respective denominator 10 and 100; uses decimal notations for fractions with denominators 10 or 100; compares two decimals to hundredths by reasoning about their size and then compares and orders fractions with like and unlike denominators of 2, 3, 4, 5, 6, 8, 10, and 12; recognizes the comparisons are valid only when 2 decimals refer to the same whole and records the results with the symbols <, > or = and justifies conclusions by using a visual model.	Requires considerable teacher support and guidance to achieve skills	Expresses a fraction with the denominator 10 as an equivalent fraction with denominator 100; uses decimal notations for fractions with denominators 10 or 100; compares two decimals to the hundredths; compares and orders fractions with like denominators or numerators	Expresses a fraction with denominator 10 as an equivalent fraction with denominator 100, and uses this technique to add (2) fractions with respective denominator 10 and 100; uses decimal notations for fractions with denominators 10 or 100; compares two decimals to hundredths by reasoning about their size and then compares and orders fractions with like and unlike denominators of 2, 3, 4, 5, 6, 8, 10, and 12; recognizes the comparisons are valid only when 2 decimals refer to the same whole and records the results with the symbols <, > or = and justifies conclusions by using a visual model.	Adds/subtracts/multiplies fractions with unlike denominators ; uses decimal notations for fractions with a denominator of 1,000; compares two decimals to the thousandths by reasoning about their size and then recognizes the comparisons are only valid when 2 decimals refer to the same whole and records the results with the symbols<, > and =.

Measurement and Data *5 Standards*	**1.0** (Needs additional support)	**2.0** (has foundational knowledge)	**3.0** (meets learning goal or expectation)	**4.0** (goes above and beyond what was taught)
1) Knows relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz; l, ml,; hr, min, sec. (1 km = 1,000 m; 1 m = 100 cm; 1 kg = 1,000 g; 1 lb = 16 oz; 1 l = 1,000 ml; 1 hr = 60 min; 1 min = 60 seconds.); Within a single system of measure, expresses measure in a larger unit in terms of a small unit; example 1 ft is 12 times as long as 1 in (1 ft = 12 in; 4 ft = 48 in).	Requires considerable teacher support and guidance to achieve skills	Demonstrates understanding that 1 km = 1,000 m; 1 m = 100 cm; 1 kg = 1,000 g; 1 lb = 16 oz; 1 l = 1,000 ml; 1 hr = 60 min; 1 min = 60 seconds; Accurately measures to the nearest cm and inch.	Knows relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz; l, ml,; hr, min, sec. (1 km = 1,000 m; 1 m = 100 cm; 1 kg = 1,000 g; 1 lb = 16 oz; 1 l = 1,000 ml; 1 hr = 60 min; 1 min = 60 seconds.); Within a single system of measure, expresses measure in a larger unit in terms of a small unit; example 1 ft is 12 times as long as 1 in (1 ft = 12 in; 4 ft = 48 in).	Accurately completes multi step conversions (i.e.: hours to minutes to seconds)
2)Makes a line plot (dot plot) representation to display a data set of measurements in fractions of a unit (1⁄2, 1⁄4, 1⁄8). Solves problems involving addition and subtraction of fractions by using information presented in line plots (dot plots).	Requires considerable teacher support and guidance to achieve skills	Identifies the fundamentals of a line plot (i.e. Xs represent data points) but unable to accurately label all components (i.e. numbers, title, labels)	Makes a line plot (dot plot) representation to display a data set of measurements in fractions of a unit (1⁄2, 1⁄4, 1⁄8). Solves problems involving addition and subtraction of fractions by using information presented in line plots (dot plots).	Derives data based on a problem and accurately creates a line plot that represents that data.
3) Solves addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems	Requires considerable teacher support and guidance to achieve skills	Demonstrates understanding of adding/subtracting to find an unknown angle but answers are inconsistent	Solves addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems	Independently interprets and solves additive angle problems (that include unknown angles)

4) Accurately measures angles in whole number degrees using a protractor; draws angles of specified measure.	Requires considerable teacher support and guidance to achieve skills	Measures angles using a protractor within 5 degrees of correct angle measure.	Accurately measures angles in whole number degrees using a protractor; draws angles of specified measure.	Constructs an angle within 5 degrees without a protractor
5) Applies the area and perimeter formulas for rectangles in real world and mathematical problems.	Requires considerable teacher support and guidance to achieve skills	Uses unit squares/boxes to count the area inside of a rectangle; uses unit side lengths to count the perimeter around a rectangle.	Applies the area and perimeter formulas for rectangles in real world and mathematical problems.	Draws and labels the perimeter of rectangles when given the rectangle's area.
Geometry *2 Standards*	**1.0** (Needs additional support)	**2.0** (has foundational knowledge)	**3.0** (meets learning goal or expectation)	**4.0** (goes above and beyond what was taught)
1) Names and draws points, lines, line segments, rays, angles (right, acute, obtuse); names and draws perpendicular and parallel lines; identifies these in two-dimensional figures.	Requires considerable teacher support and guidance to achieve skills	Names points, lines, line segments, rays, angles (right, acute, obtuse), but may not be able to draw them consistently; identifies lines but may not consistently name or draw them; identifies perpendicular and parallel lines but may not consistently name or draw them; identifies these in two-dimensional figures.	Names and draws points, lines, line segments, rays, angles (right, acute, obtuse); names and draws perpendicular and parallel lines; identifies these in two-dimensional figures.	Names and draws straight and reflex angles; constructs and creates various designs using lines, segments, and rays; identifies various lines, segments, and rays from collinear points (ex: line w/ multiple points)

2) Classifies two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size; when given a definition, creates the appropriate polygon; recognizes right triangles as a category, and identifies right triangles.	Requires considerable teacher support and guidance to achieve skills	Provides properties of a given shape; identifies a right angle and a triangle.	Classifies two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size; when given a definition, creates the appropriate polygon; recognizes right triangles as a category, and identifies right triangles.	Identifies and applies multiple attributes of polygons, and that a given polygon can have many different names.
Problem Solving *2 Standards*	**1.0** (Needs additional support)	**2.0** (has foundational knowledge)	**3.0** (meets learning goal or expectation)	**4.0** (goes above and beyond what was taught)
1)Makes sense of single and multi-step word problems using their mathematical knowledge and provides a reasonable method of solving them; mastered solving word problems independently.	Requires considerable teacher support and guidance to achieve skills	Makes sense of single and multi-step word problems using their mathematical knowledge and provides a reasonable method of solving them most of the time.	Makes sense of single and multi-step word problems using their mathematical knowledge and provides a reasonable method of solving them; mastered solving word problems independently.	Understands multi-step word problems and communicates precisely by engaging in discussion, written expression, and reasons while using appropriate mathematical terminology and models; masters solving advanced word problems using multiple methods independently.
2) Gives sufficient written and/or spoken explanation, clearly communicates an understanding of how they solved the problem; explains how their answer is reasonable; reasons abstractly and then uses tools strategically to solve the problem.	Requires considerable teacher support and guidance to achieve skills	Gives a partial, or limited written and/or spoken explanation to clearly communicate an understanding of how they solved the problem; Has trouble explaining if their answer is reasonable.	2) Gives sufficient written and/or spoken explanation, clearly communicates an understanding of how they solved the problem; explains how their answer is reasonable; reasons abstractly and then uses tools strategically to solve the problem.	Gives very detailed written and/or spoken explanation that includes a logical description of steps taken using both words and/or pictures and diagrams; explains how their answer is reasonable in an advanced word problem with multiple steps.